

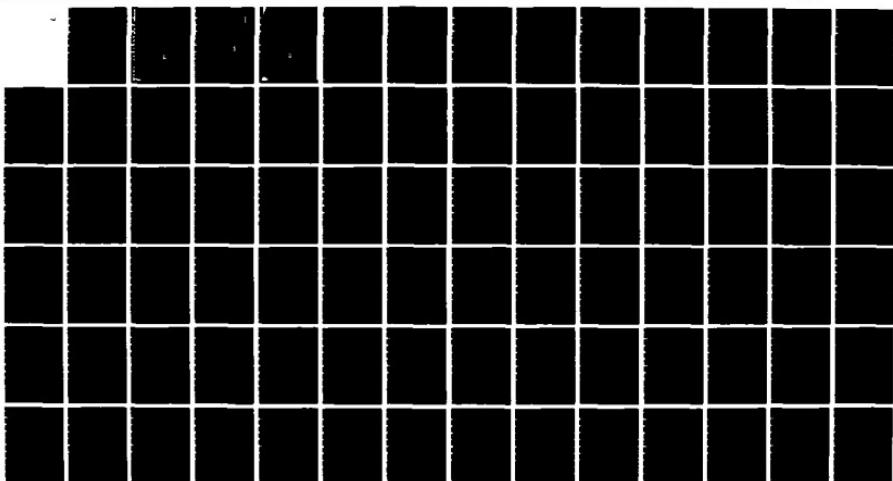
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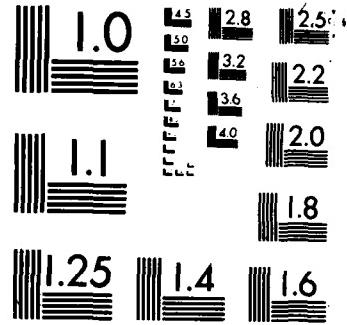
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Report 1239-01-82-CR

UNCLASSIFIED

# **Users' Guide for the Projection of Enlisted Reserve Component Strengths Version II (PERCS-II)**

By

Jerry Allen, Project Manager  
George Brown  
Kathy Loftus

January 1982

MANAGEMENT SYSTEMS DIVISION

**GENERAL**  
**RESEARCH**   
CORPORATION

A SUBSIDIARY OF FLOW GENERAL INC.  
7655 Old Springhouse Road, McLean, Virginia 22102

Prepared For:

Scientific Officer  
Office of the Chief of Naval Operations  
Department of the Navy  
Washington, D.C. 20350

Attn: Mr. R. Hellex  
Reference: N00014-81-C-0600

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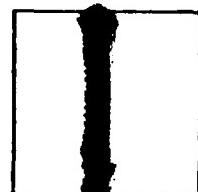
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SECTION 1  
INTRODUCTION

1.1 PURPOSE OF USERS' MANUAL

The objective of the Users' Manual (UM) for the Projection of Enlisted Reserve Component Strengths Version II (PERCS-II) System is to provide the users' non-ADP personnel with the information necessary to effectively use the system.

1.2 PROJECT REFERENCES

The system described in this UM is designed to project Selected Reserve (SR) and Individual Ready Reserve (IRR) enlisted end strengths and to provide a user-oriented facility for policy evaluation. Development, testing, and initial implementation of the system was performed on the IBM 370 computer system at the Planning Research Company (PRC) Computer Center, 7670 Old Springhouse Road, McLean, Virginia 22102. The following references are applicable to the development of the PERCS-II system:

Outline of an Enlisted Reserve Inventory Projection Methodology,  
GRC Technical Working Document Number 1091-01-79-IT, General  
Research Corporation, McLean, Virginia 22102, May 1979.

Information Requirements for an Enlisted Reserve Inventory  
Projection Model, GRC Technical Working Document Number  
GRC-PSD-1091D-05/R2, General Research Corporation, McLean,  
Virginia 22102, November 1979.

System Specification for the Projection of Enlisted Reserve  
Component Strengths Version II (PERCS-II) System, GRC Report  
Number 1091-02-80-IT, General Research Corporation, McLean,  
Virginia 22102, March 1980.

### 1.3 TERMS AND ABBREVIATIONS

The following terms, abbreviations, and acronyms are used throughout this Users' Manual:

ADP	Automatic Data Processing.
Control Attribute	Parameters which the user may use to define the characteristics of the component being projected.
DBG	Data Base Generator.
DCM	Data Conversion Module.
Default	The data value assumed by a program if the user does not provide a value.
DMDC	Defense Manpower Data Center.
EFG	Enlisted Forecast Generator.
GRC	General Research Corporation.
IRR	Individual Ready Reserve.
OASD(MRA&L)	Office of the Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics.
PERCS-II	Projection of Enlisted Reserve Component Strengths, Version II.
PRC	Planning Research Company.
Prompt	A message from a program indicating that some type of data input is required.
RPG	Report Generator Program.
SR	Selected Reserve.
Subattribute	A value which a control attribute may have.
Subpopulation	A user-defined subdivision of the Reserve component being projected.
TTY	Teletype.
USNR	US Navy Reserve.

SECTION 2  
SYSTEM SUMMARY

2.1 SYSTEM APPLICATION

The original purpose of the PERCS-II system was to provide OASD(MRA&L) personnel with a capability to rapidly and accurately project enlisted end strengths for each of the six Reserve Components shown in Table 2.1.

TABLE 2.1  
ENLISTED RESERVE COMPONENTS

U.S. Army Reserve
U.S. Air Force Reserve
U.S. Navy Reserve
U.S. Marine Corps Reserve
Army National Guard
Air National Guard

As implemented for OP-964D, PERCS-II provides the user with the capability to dynamically select the manner in which the USNR is to be defined. Preprocessors then generate the starting inventory and all required rates. The system also prompts the user for any options or input that are to be used, performs up to 10 years of projections; and creates all reports, routing them either to the user's terminal or a line printer depending on the volume of the output.

2.2 SYSTEM OPERATION

The PERCS-II system is designed for the use of, and operation by, OP-964D personnel. The Defense Manpower Data Center (DMDC) provides the only required input other than that input at execution time. The DMDC data are the counts of enlisted personnel actions for the USNR during the fiscal year and are generated at least annually.

All other input comes from the user at execution time. All output from the system is intended for the individual executing the program(s).

### 2.3 SYSTEM CONFIGURATION

Execution of the PERCS-II system requires a teletype (TTY) compatible terminal. Use of a cathode-ray tube (CRT) device will result in the loss of output data. Any TTY terminal having an 80-character print line and an acoustic coupling capability can be used to execute the programs within the system.

The PERCS-II system was developed upon an ITEL Advanced System 5 (AS/5) computer system at the PRC Computer Center, operating under a shared-spool OS VS2/Multiple Virtual Storage (MVS) operating system with JES2. The AS/5 is totally plug compatible with an IBM 270/158. In addition to the TTY terminal, PERCS-II requires the following peripherals:

- Two 1600-BPI, 9-track tape drives.
- Direct-access storage. The amount of storage required will vary with the user.
- System direct access, temporary storage.
- Line printer.

### 2.4 SYSTEM ORGANIZATION

Figure 2.1 illustrates the configuration of the PERCS-II system.

#### 2.4.1 Input

Primary inputs to the system are two tape files generated by DMDC. One file contains continuants, constructed gains, and constructed losses; the second file contains same-year gains/losses developed from a transaction file. These tapes are received once a year and contain data for the USNR from the previous fiscal year. All other input is generated by the user in accordance with the specifications of the UM.

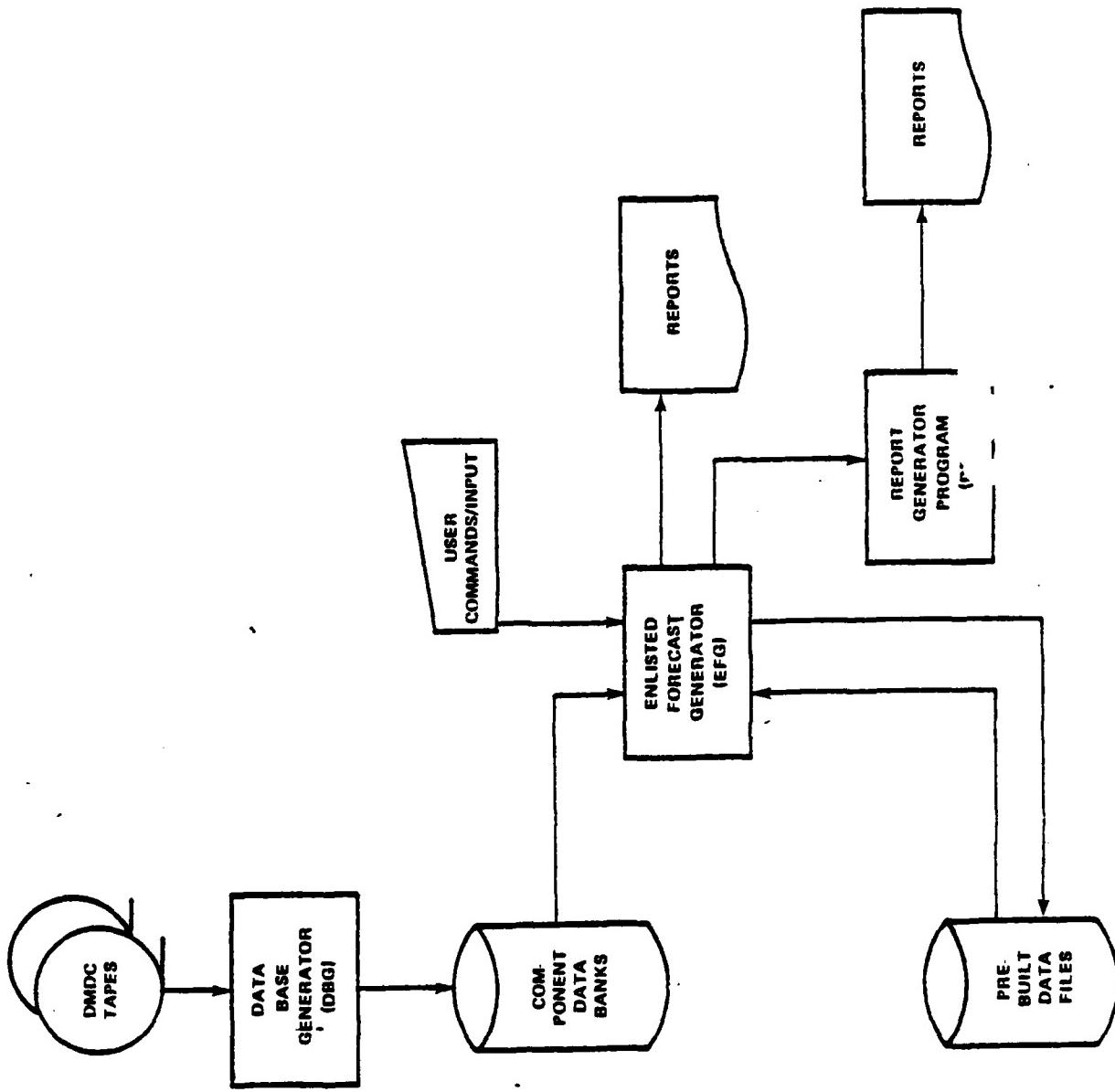


Figure 2.1. PERCS-II System Organization

#### 2.4.2 Programs

The PERCS-II system contains two stand-alone programs: the Data Base Generator (DBG) and the Enlisted Forecast Generator (EFG).

##### 2.4.2.1 Data Base Generator

The DBG prepares the DMDC data tapes for use by the EFG. The DBG, executed each time new DMDC tapes are received, performs two functions: it edits the DMDC data to the format required by PERCS-II, and creates a USNR data base file.

##### 2.4.2.2 Enlisted Forecast Generator

The EFG performs all functions required to define and project the enlisted inventory of the USNR. Inputs to this program consist of user-supplied commands and either a data base file from the DBG or a prebuilt file generated by a previous execution of the EFG. Output from the EFG consists of selected reports and, optionally, a file to be saved.

SECTION 3  
TECHNICAL OPERATIONS

This section of the LM provides the details necessary to prepare inputs for each of the programs in the PERCS-II system, and it also explains the outputs available from the programs. Section 3 has been divided into five subsections: the first describes the logon procedures for the Federal CSS computer; the next two subsections describe, in turn, each of the two programs in the PERCS-II system. Appendix A summarizes the inputs for each of the programs in the PERCS-II system. Appendix B summarizes the error messages generated by invalid input for each of the programs.

3.1 LOGON PROCEDURES

Each of the programs in the PERCS-II system has been designed to allow initiation from the user's terminal through standard VP/CSS commands. Table 3.1 illustrates the protocol for logon. The "c<sub>r</sub>" character indicates carriage return (it may be a carriage return, skip, or entry depending on the type of terminal being used). Lowercase commands indicate information typed by the user; uppercase indicates messages or commands received from the computer system. (These definitions of c<sub>r</sub>, lowercase, and uppercase will apply throughout this section.)

---

TABLE 3.1  
LOGON PROCEDURES

c<sub>r</sub>  
CSS ONLINE - WSH2  
link hsys uzj012 c<sub>r</sub>  
  
PASSWORD:  
XXXXXXXXXXXXXXXXXXXX  
  
A/C INFO:  
964grc  
  
HSYS READY  
CSS.304 11AUG81  
CSS.304 11AUG81  
hh.mm.ss >

After all desired processing has been completed, the terminal is disconnected from the computer by entering the "LOGOUT <sup>C</sup>r" command.

### 3.2 DATA BASE GENERATOR

The DBG must be executed each time a new set of data tapes is received from DMDC. It will edit/validate each data element on the DMDC tapes and produce a data base file for the USNR. It must be executed before the EFG can be run.

#### 3.2.1 Initiation Procedures

Prior to the execution of the DBG, the tapes received from DMDC must be logged into Federal CSS. The user must request a bin number for each tape. The bin number will be a five-character, alphanumeric code; the first character being alphabetic, the next four, a unique numeric identifier.

Once this procedure has been completed, the user may actually execute the DBG by issuing the command:

dbg <sup>C</sup>r

at his/her remote terminal.

#### 3.2.2 Input Requirements

The DBG routines will prompt the user for all required input. Table 3.2 shows an example of a complete session to execute the DBG. The prompts and their appropriate responses are:

- ENTER BIN NUMBER OF CONSTRUCTED DATA TAPE. The full five-character bin number assigned by Federal CSS is required.
- ENTER BIN NUMBER OF TRANSACTED DATA TAPE. Enter the Federal CSS assigned, five-character bin number for the second tape.
- ENTER LAST TWO DIGITS OF BASE YEAR. Enter the last two digits of fiscal year of the data base.

TABLE 3.2  
DBG EXECUTION AND INPUT

dbg <sup>c</sup><sub>r</sub>

ENTER BIN NUMBER OF CONSTRUCTED DATA TAPE

H8002 <sup>c</sup><sub>r</sub>

ENTER BIN NUMBER OF TRANSACTED DATA TAPE

H8007 <sup>c</sup><sub>r</sub>

ENTER LAST TWO DIGITS OF BASE YEAR

80<sup>c</sup><sub>r</sub>

ENTER PRIORITY AT WHICH BATCH JOB IS TO BE RUN

0--Immediately 1--Within 4 hours 2--Overnight

2 <sup>c</sup><sub>r</sub>

- ENTER PRIORITY AT WHICH BATCH JOB IS TO BE RUN  
0--IMMEDIATELY 1--WITHIN 4 HOURS 2--OVERNIGHT  
Enter either 0, 1, or 2.

### 3.2.3 Output Formats

The DBG generates three classes of output: prompts for and responses to input, a machine-readable output file, and summary statistics.

#### 3.2.3.1 Prompts and Responses

The prompts for input have been described above. If all required information is properly input, the system will return to the CSS environment indicating that the job to process the DMDC tapes has been submitted to the computer and that the terminal is now ready to perform another function. When the job is to be run, the user will be requested to release the P disk. This may be accomplished by the command "detach P <sup>c</sup>r" or by entering the "logout <sup>c</sup>r" command.

#### 3.2.3.2 Machine-Readable File

This file constitutes the primary output of the DBG. This file contains, in binary form, the vectors required by the EFG. The file name created by the DBG is in the form of: USNRFYXX where "XX" is the response received from the prompt, "ENTER LAST TWO DIGITS OF BASE YEAR". At this time the USNRFY80 file has been created from an execution of DBG. An existing file with this name, e.g., from a previous execution of the DBG, will be deleted automatically. If the user wishes to keep previously created files, he/she must rename and save them using standard CSS commands.

#### 3.2.3.3 Summary Statistics

The final class of output consists of three pages of summary statistics. The first two pages contain summaries of the data read from the constructed- and transacted-data tapes, respectively. The third page summarizes the vectors output from the DBG .

Table 3.3 shows an annotated example of this output.

### 3.3 ENLISTED FORECAST GENERATOR

The EFG is the primary program in the PERCS-II system. It provides for user input of data and control parameters, projects the inventory, and controls the generation of all reports.

#### 3.3.1 Initiation Procedures

Prior to the execution of the EFG, the DBG must have been executed to produce the USNR data base. Execution of the EFG is initiated with the command:

efg c\_r

#### 3.3.2 Input Requirements

The EFG will prompt the user for all required input. Several universal responses are available (i.e., they may be given in response to any prompt, except where specifically prohibited, and will have the same meaning for each prompt). The universal responses are:

- HELP. The EFG is fully tutorial. Entering "HELP" as a response will provide the user with an explanation of the prompt and a list of valid responses.
- CX. This is the cancel command. When entered, it cancels the previously submitted command. This command is used when a valid response is erroneously given to a prompt.
- STOP. This is the termination command. Whenever the EFG is in a prompting loop (i.e., it is repeatedly asking for the same information), entering "STOP" will terminate the loop and allow processing to continue.
- Null. The null response is generated by pressing the carriage return without having entered any data. This response generates the appropriate default value for the current prompt.

TABLE 3.3  
DBG SUMMARY STATISTICS

PRIMTF DBGLINK DATA P

PERCS-II DATA BASE GENERATOR CONSTRUCTED TAPE STATISTICS												
TOTAL RECORDS READ: 31411 (1) TOTAL HITS READ: 1335747 *** BYPASSED RECORDS *** (2) INVALID COMPONENT: RECORDS 24643 HITS 1144497 HIT COUNT <= ZERO: RECORDS 0 HITS 0												
*** EDITTED RECORDS *** (3)												
DATA ELEMENTS												
COMP	LOS	YETSD	YETSN	CAT	TYPE	SEX	RACE	EDUC	MOS	UDS	SOE	BONUS
USAR	0	0	0	0	0	0	0	0	0	0	0	0
USMR	0	0	2307	0	0	0	0	0	0	0	5845	0
USAF	0	0	0	0	0	0	0	0	0	0	0	0
USMC	0	0	0	0	0	0	0	0	0	0	0	0
ARMG	0	0	0	0	0	0	0	0	0	0	0	0
ANG	0	0	0	0	0	0	0	0	0	0	0	0
*** TOTALS BY COMPONENT, CATEGORY, AND TYPE-CODE *** (4)												
0	SELECTED RESERVE											
	-CONTINUANT-	-TRANSFER-	-LOSS-						-GAIN-			
COMP	RCRDS	HITS	RCRDS	HITS	RCRDS	HITS	RCRDS	HITS	RCRDS	HITS		
USAR	0	0	0	0	0	0	0	0	0	0		
USMR	2110	50765	906	10598	557	9998	781	16344				
USAF	0	0	0	0	0	0	0	0	0	0		
USMC	0	0	0	0	0	0	0	0	0	0		
ARMG	0	0	0	0	0	0	0	0	0	0		
ANG	0	0	0	0	0	0	0	0	0	0		
TOT	2110	50765	906	10598	557	9998	781	16344				
0	INDIVIDUAL READY RESERVE											
	-CONTINUANT-	-TRANSFER-	-LOSS-						-GAIN-			
COMP	RCRDS	HITS	RCRDS	HITS	RCRDS	HITS	RCRDS	HITS	RCRDS	HITS		
USAR	0	0	0	0	0	0	0	0	0	0		
USMR	829	33271	616	3538	446	33834	523	32902				
USAF	0	0	0	0	0	0	0	0	0	0		
USMC	0	0	0	0	0	0	0	0	0	0		
ARMG	0	0	0	0	0	0	0	0	0	0		
ANG	0	0	0	0	0	0	0	0	0	0		
TOT	829	33271	616	3538	446	33834	523	32902				

- (1) Total Inputs--these are the grand totals of the number of input records read from the tape.
- (2) Bypassed Records--these are the totals of non-USNR records and un-editable records which were skipped by the DBG.
- (3) Edited Records--these are the record counts, by data element, of records that required some form of editing.
- (4) Totals--these are the total records and hits by category and type of action. "Transfers" are computed from the constructed data as continuants who changed category during the year. All counts are based on information as of the beginning of the year. For example, Selected Reserve transfers are individuals who began the year in the Selected Reserve and ended the year in the Individual Ready Reserve.

TABLE 3.3 (Cont)

## DBG SUMMARY STATISTICS

PERCS-II DATA BASE GENERATOR  
TRANSACTED TAPE STATISTICS

TOTAL RECORDS READ: 4022 (1)  
 TOTAL HITS READ 41033  
 \*\*\* BYPASSED RECORDS \*\*\* (2)  
 INVALID COMPONENT: RECORDS 3200  
 HITS 32345  
 HIT COUNT <= ZERO: RECORDS 0  
 HITS 0

## \*\*\* EDITTED RECORDS \*\*\* (3)

COMP	DATA ELEMENTS											
	LOS	YETSD	YETSM	CAT	TYPE	SEX	RACE	EDUC	MOS	UDS	SOE	BONUS
USAR	0	0	0	0	0	0	0	0	0	0	0	0
USNR	0	0	0	0	0	0	0	0	0	0	822	0
USAF	0	0	0	0	0	0	0	0	0	0	0	0
USMC	0	0	0	0	0	0	0	0	0	0	0	0
ARNG	0	0	0	0	0	0	0	0	0	0	0	0
ANG	0	0	0	0	0	0	0	0	0	0	0	0
*** TOTALS BY COMPONENT, CATEGORY, AND TYPE-CODE *** (4)												

## 0 SELECTED RESERVE

## --W/IN YR--

COMP	RCRDS	HITS
USAR	0	0
USNR	822	8698
USAF	0	0
USMC	0	0
ARNG	0	0
ANG	0	0
TOT	822	8698

## 0 INDIVIDUAL READY RESERVE

## --W/IN YR--

COMP	RCRDS	HITS
USAR	0	0
USNR	0	0
USAF	0	0
USMC	0	0
ARNG	0	0
ANG	0	0
TOT	0	0

(1) Total Inputs--these are the grand totals of the number of input records read from the tape.

(2) Bypassed Records--these are the totals of non-USNR records and uneditable records which were skipped by the DBG.

(3) Edited Records--These are the record counts, by data element, of records that required some form of editing.

(4) Totals--these are the total records and hits by category and type of action. "Transfers" are computed from the constructed data as continuants who changed category during the year. All counts are based on information as of the beginning of the year. For example, Selected Reserve transfers are individuals who began the year in the Selected Reserve and ended the year in the Individual Ready Reserve.

TABLE 3.3 (Cont)  
DBG SUMMARY STATISTICS

PERCS-II DATA BASE GENERATOR  
OUTPUT VECTOR COUNTS

*** TOTALS BY COMPONENT, CATEGORY, AND TYPE-CODE *** (1)											
SELECTED RESERVE											
-CONTINUANT-		--TRANSFER--		---LOSS---		--W/IN YR--		---GAIN---			
COMP	RCRDS	HITS	RCRDS	HITS	RCRDS	HITS	RCRDS	HITS	RCRDS	HITS	
USAR	0	0	0	0	0	0	0	0	0	0	0
USMR	6330	50765	2718	10598	1671	9998	4932	8688	1279	16344	
USAF	0	0	0	0	0	0	0	0	0	0	0
USMC	0	0	0	0	0	0	0	0	0	0	0
ARNG	0	0	0	0	0	0	0	0	0	0	0
ANG	0	0	0	0	0	0	0	0	0	0	0
TOT	6330	50765	2718	10598	1671	9998	4932	8688	1279	16344	
INDIVIDUAL READY RESERVE											
COMP	RCRDS	HITS	RCRDS	HITS	RCRDS	HITS	RCRDS	HITS	RCRDS	HITS	
USAR	0	0	0	0	0	0	0	0	0	0	0
USMR	2487	33271	1848	3538	1338	33834	0	0	787	32902	
USAF	0	0	0	0	0	0	0	0	0	0	0
USMC	0	0	0	0	0	0	0	0	0	0	0
ARNG	0	0	0	0	0	0	0	0	0	0	0
ANG	0	0	0	0	0	0	0	0	0	0	0
TOT	2487	33271	1848	3538	1338	33834	0	0	787	32902	
*** YEAR-END INVENTORIES *** (2)											
	USAR	USMR	USAF	USMC	ARNG	ANG			TOT		
SR	0	70647	0	0	0	0			70647		
IRR	0	76771	0	0	0	0			76771		
TOTAL	0	147418	0	0	0	0			147418		

12.08.32 >

- (1) Output Totals--these are the total record and hits as output from the DBG after editing. The number of records may differ from the corresponding input figure as a result of the editing process; the number of hits, however, should be the same for both input and output.
- (2) Year-End Inventories--these figures give the end strengths, by category, generated from the input data.

The various prompts issued by the EFG, their purpose, and the legal responses are described in the following paragraphs.

### 3.3.2.1 File Flag

The response to the first prompt,

ENTER PREBUILT-FILE FLAG

determines whether or not prebuilt files are to be used. Valid options are:

- 0. An input of 0 (zero) specifies that a prebuilt file neither exists nor is one to be created.
- 1. An input of 1 (one) specifies that a prebuilt file exists and should be used.
- 2. An input of 2 (two) specifies that a prebuilt file does not currently exist but the base-year data created by the current execution is to be saved as a prebuilt file for the later executions.

### 3.3.2.2 Base Year

This is also a conditional prompt dependent upon the selected prebuilt-file flag. If either 0 (no prebuilt file) or 2 (prebuilt file to be created) was entered, the prompt:

ENTER LAST TWO DIGITS OF BASE YEAR

will be generated requesting the fiscal year of the data base. For example, if the data base was generated from FY 80 data, the response to this prompt would be "80." This information is used to determine the desired USNR data base file and to generate the output reports. The only valid responses for this prompt are the two-digit base year and "HELP."

### 3.3.2.3 Filename

This prompt is a conditional one based upon the response to the file flag prompt. If either 1 or 2 was responded for the file flag, the EFG will prompt:

ENTER NAME OF PREBUILT FILE

The response to this prompt will be used to identify the file to be used (flag=1) or created (flag=2). A null return will result in the regeneration of this prompt. Valid responses are:

- Filename. The name to be used for the prebuilt file. This name is subject to the following constraints:
  - It may be no longer than eight characters.
  - It may be composed of any combination of alphabetic and numeric characters, but the first character must be alphabetic.If a file is being created, the filename must be unique; if a prebuilt file is being used, the filename must match the name precisely.
- HELP. This response creates a list of the current filenames for prebuilt files and reissues the filename prompt.

### 3.3.2.4 Subpopulation Definition

This prompt is also a conditional one based upon the response to the file flag prompt. If either 0 or 2 was responded for the file flag, the EFG prompt will be

INPUT SUBPOPULATION ATTRIBUTE

indicating the beginning of a prompt loop; i.e., after each valid response, the prompt will be reissued until the correct termination command is given. Data entered in response to these prompts are used to subdivide the USNR into subpopulations. A maximum of 24 subpopulations may be defined by specifying the attribute values ("subattributes")

that are to be included in the subpopulation. Legal responses to this prompt are:

- OTHER (default). Responding OTHER (or null) will terminate the prompt loop and automatically create two additional subpopulations--other male and other female. All records not meeting the definition of one of the explicitly defined subpopulations will be included in the appropriate "other" subpopulation.
- STOP. The STOP command also terminates the prompt loop. It does not, however, create the two "other" subpopulations. When this option is used, all records not meeting the definition of an explicitly defined subpopulation will be skipped.
- CX. This response is the cancel command. It will erase all subpopulations defined to the point at which CX was entered and continue the prompt loop.
- HELP. This command provides a tutorial for responding to the subpopulation definition prompt.
- Subattribute list. This response is the list of subattributes to be included in the subpopulation. It is described in detail in the following paragraphs.

The subattribute list is composed of one or more subattribute abbreviations, in any order, separated by commas. There may be no imbedded blanks. Table 3.4 lists the control attributes with their applicable subattributes. Records matching the values contained in a subattribute list will be counted in that subpopulation.

For example, consider the subattribute list:

MALE, HSDG, CMBT

This response would create a subpopulation consisting of all males with high school diplomas serving in a combat-arms specialty. Records not meeting all three of these specifications would not be included in this subpopulation.

TABLE 3.4  
CONTROL ATTRIBUTES AND SUBATTRIBUTES

ATTRIBUTE		SUBATTRIBUTE	
ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION
SEX	Gender	MALE FEM	Males Females
RACE	Race	MINR NMIN	Minority Non-minority
EDUC	Education	HSGD NHSG	High-school diploma Non-high-school diploma
MOS	Specialty	CMBT SPRT	Combat arms Support
UDS	Unit Deploy- ment Schedule	M30 M60 M90 M120 CND OUDS	M to M+30 M+31 to M+60 M+61 to M+90 M+91 to M+120 Critical, non- deploying Other, UDS
SOE	Source of Entry	NPS PSA PSO	Non-prior service Prior service from active force of same service Prior service, other
BON	Bonus Acceptance	NOB ENL RENL BOTH	No bonuses Enlistment bonus only Reenlistment bonus only Enlistment and reenlistment bonus

A subpopulation may contain multiple subattributes for the same attribute, e.g.:

MALE,CMBT,PSA,PSO

This input would define a subpopulation of males serving in a combat-arms specialty with a source of entry of either prior service, active or prior service, other.

The gender attribute is processed differently from the other control attributes. If a gender subattribute, either male or female, is specified in a subattribute list, a subpopulation will be created only for the specified value. If neither is specified, two subpopulations will be created--one for males, the other for females. For example, the input:

NPS,HSDG

will create two subpopulations: non-prior service males with a high school diploma and non-prior service females with a high school diploma. Gender is the only attribute for which subpopulations are automatically created if a subattribute is not given.

### 3.3.2.5 Stop Confirmation

This is a conditional prompt that is issued if, and only if, the subpopulation definition prompt loop was terminated with a STOP command. The format of the prompt is:

PLEASE CONFIRM STOP COMMAND

This prompt is issued because records may be lost when the STOP command is used. Valid responses to this prompt are:

- STOP (default). This response confirms the STOP command. The prompt loop is terminated without creating additional subpopulations.
- OTHER. This response is identical to having responded OTHER to the subpopulation definition prompt. The prompt

loop is terminated and the two "other" subpopulations are generated.

- CX. This response cancels the STOP command. The subpopulation definition prompt is resumed at the point at which it was interrupted, i.e., no subpopulation definitions are lost.

### 3.3.2.6 Run Identification

The prompt

#### INPUT RUN IDENTIFICATION

is generated for each iteration of the EFG. Legal response to this prompt is any twelve character string of the user's choice. This 12-character identifier will be printed on each generated report to assist the user in matching the output with the input. The only applicable universal command for this prompt is HELP; STOP, CX, and null, if input, will be used as the 12-character identifier.

### 3.3.2.7 Projection Period

The prompt

#### INPUT PROJECTION PERIOD (0-9)

requests the number of fiscal years the inventory is to be projected.

Valid input for this prompt is:

- Number. Any digit from 0 (default) to 9. A value of 0 will generate the maximum value of 10 fiscal years.
- CX. The cancel command regenerates the run identification prompt.

STOP is not a valid command for this prompt; if entered, a null is assumed.

### 3.3.2.8 Override Options

The EFG next generates a series of four, similar prompts:

RATE OVERRIDE OPTION?  
PROJECTION CONSTRAINT OPTION?  
COST ANALYSIS OPTION?  
BONUS EFFECTS OPTION?

The valid responses to each of these prompts are identical and all have similar results:

- YES. The prompted option is desired; the appropriate module will be executed.
- NO. The prompted option is not desired; the appropriate module will be bypassed.
- HELP. The tutorial routines will be executed.
- CX. The current prompt will be ignored and the previously generated prompt will be reissued.
- STOP. This response will be equivalent to responding NO to this prompt and to each of the remaining prompts for override options. For example, if "STOP" is responded to the PROJECTION CONSTRAINT OPTION prompt, the "NO" response will be assumed for it, for the cost analysis option, and for the bonus effects option.

These prompts have no default response.

### 3.3.2.9 Rate Override Prompts

These prompts are generated only if the rate override option or the bonus effects option have been selected. The user will be prompted in turn for each of the arrays which may be overridden, specifically:

- Loss rates (Rate override option)
- YETS=1 loss rates (Bonus effects option)

- Redistribution rates (Bonus effects option)
- Category transfer rates (Rate override option)
- Within-year loss rates (Rate override option)
- Gain distributions (Rate override option)

For each projection year, the user will be requested to specify whether or not the arrays are to be altered. Valid responses are:

- YES
- NO (default)

If the YES option is requested, a series of second-level prompts will then be generated to ascertain exactly which rates are to be changed and what their new values are to be. These second-level prompts are described in the following paragraphs.

3.3.2.9.1 Range Prompts. The user is first prompted for the range to be altered for the LOS, the Category, and the Subpopulation. The valid response to these prompts is the same in each case:

- A single number, indicating a specific value to be altered, e.g.,

INPUT LOS RANGE  
4

will affect only those cells with LOS=4.

- Two numbers separated by a dash, e.g.,

INPUT LOS RANGE  
4-6

will affect those cells with LOS=4, 5, or 6.

- MALE. This response, valid only for the subpopulation prompt, will set the range equal to all male subpopulations.

- FEMALE. This response, valid only for the subpopulation prompt, will set the range equal to all female subpopulations.
- Null. The default response will set the range to the maximum possible for the range being requested, e.g., the null response to the LOS prompt will set the range from 1 to 31.

3.3.2.9.2 Option Prompt. This prompt determines how the new rate is to be specified, as a distinct new value (1) or as a percentage change to the existing value (2). This prompt is not issued if the gain distribution array is being overriden; a value of 1 is assumed in this instance.

#### 3.3.2.9.3 Data Value. The prompt

##### INPUT NEW DATA VALUE

is next issued. The response to this prompt should be the desired new rate, either the explicit rate (option 1) or the percentage which the old rates are to be changed (option 2). This number may be specified as:

- A signed number, e.g., 10.3, .103, 103
- A signed number followed by a percent sign, e.g., -10.3%

If the percent sign is specified, the number will be automatically divided by 100. If the input number does not lie between zero and 1, it will be repeatedly divided by 100 until it falls within these bounds.

#### 3.3.2.9.4 Redistribution Values. The prompt

##### INPUT NEW REDISTRIBUTION VALUES

will be issued instead of the "INPUT NEW DATA VALUE" prompt if the redistribution rates are to be altered. Response to this prompt should be a series of seven numbers (as described in 3.3.2.9.3 above)

separated by commas. Successive commas can be used to indicate a value of zero; if fewer than seven numbers are entered, the remaining values will be assigned a value of zero.

3.3.2.9.5 Additional Override Prompt. Once the new data value has been entered, the prompt

ADDITIONAL OVERRIDES DESIRED?

will be generated to determine if additional cells are to be overwritten in the array currently being processed. A response of YES will cause the range prompts to be reissued; a response of NO terminates the second-level prompt sequence.

3.3.2.10 Gain Input Routines

Once the gain option has been selected, the user has a variety of options on how the number of gains is to be input. Initiation of the routines is marked by the prompts:

GAIN INPUT ROUTINE, PROJECTION YEAR 1  
PLEASE ENTER DESIRED GAIN OPTION

The EFG is now in a double prompt loop--one loop, controllable by the user, is for the specific gain option; the other loop, controlled by the EFG, is for the projection year. Valid responses for the prompts are:

- STOP (default). This response terminates the option prompt loop for the current projection year. If this is given as the initial response, the gain values for the previous projection year--or base year if this is the first projection year--will be assumed. The double prompt will be generated for the next projection year, automatically, until data are input for each of the projection years.

- TOT. This response indicates that you desire to input the total actual gains. The EFG will generate a secondary prompt specifically requesting the number of total gains to be used. This figure will be distributed by LOS, YETS, subpopulation, and category and decremented to account for within-year losses.
- Subpopulation. The total gains for a specific subpopulation may be specified by inputting the subpopulation number in response to the prompt. The EFG will adjust both the total gain figure and the subpopulation distributions. A secondary prompt will be issued requesting the gains for the specified subpopulation.
- MIXD. This is a specialized response allowing the input of specific gains for prespecified groupings of characteristics. At present, this is implemented only for a gender/category grouping. Both the total gains and distribution will be adjusted with this input.
- Attribute. Specifying one of the control attributes allows the alteration of the distribution of gains among that attribute's subattributes. The EFG will alter all distributions, but leaves the total gains figure unaltered.
- CAT. Responding "CAT" allows the user to alter the distribution of the gains by category. The total gains are unaffected.

Whenever a response to the gain option prompt other than STOP is issued, secondary prompts are issued automatically for the required data. Legal responses for the secondary prompts are:

- Null. Responding null or zero directs the EFG to utilize the number already in the data files as the gain value.
- CX. The cancel command cancels the current gain option.
- Number. The number of gains for the prompt value. Depending on the gain option, this number will be the

actual number of gains or a figure used to generate the distribution.

### 3.3.2.11 Projection Constraint Options

The prompts detailed in this section are issued only if the projection constraint option has been selected. The first prompt issued will be:

INPUT END STRENGTH OPTION

requesting the manner in which the goal end strengths to be achieved are to be specified. Valid responses to this prompt are:

- TOT. A single number for the total Reserve force is to be input.
- SEX. Two numbers are to be input, one for males, the other for females.
- CAT. Two numbers are to be input, one for SR, the other for IRR.
- MIXD. Four numbers are to be input: SR males, SR females, IRR males, and IRR females.
- Null. The null response terminates the prompt loop for the end strength options.

CX and STOP are not valid responses for this prompt; HELP (or H) will generate the tutorial response.

If TOT, SEX, CAT, or MIXD are responded to the end strength option prompt, second-level prompts will be generated of the form:

INPUT END STRENGTH FOR xxxxxxxxxxxxxxxx

where "xxxxxxxxxxxxxx" will detail the specific information being requested, e.g., "TOTAL FORCE", "SR MALES". The valid response to

this series of prompts is the number indicating the goal end strength for the portion of the force being requested.

Once all end strengths have been specified, i.e., the null response has been given to the end strength option prompt, the prompt

#### PRIORITY OVERRIDES DESIRED FOR SR

will be issued, allowing the user to alter the order in which the subpopulations will be filled. Valid responses are YES (or Y) and NO (or N). If YES is responded, the secondary prompt will be issued:

#### INPUT SUBPOPULATIONS FOR PRIORITIES

1 2 3 4 5 ...

Valid response to this prompt is a list of which subpopulations are to have the indicated priority. Each subpopulation should be aligned directly under the corresponding priority number. For example, if ten subpopulations have been defined, the prompt and response should look as follows:

#### INPUT SUBPOPULATIONS FOR PRIORITIES

1 2 3 4 5 6 7 8 9 10  
5 4 3 2 1 10 6 7 8 9c<sub>r</sub>

The default priority is the order in which the subpopulations were initially defined by the user.

When the new priorities have been entered, or if NO was responded to the priority override prompt, the prompt

#### PRIORITY OVERRIDES DESIRED FOR IRR

will be issued. This prompt, and the subsequent prompts, are identical to those described above except they are for the IRR instead of the SR.

### 3.3.2.12 Report Code

The next prompt following the gain option loops will be:

#### INPUT REPORT CODE OPTION

requesting specification of the desired reports. Legal responses for this prompt are:

- STOP (default). This response terminates the report code loop. If no reports have been requested, report IS01 will be generated by default.
- CX. This response cancels the immediately preceding report.
- Code. Any of the legal report codes listed in Table 3.5.

If the report requested is a detailed report--indicated by a "D" in the second position of the report code--secondary prompts, described in section 3.3.2.13 below, will be issued to ascertain what detail is desired. Following specification of detail, or immediately if a summary report was requested, the following information is printed:

PAGES FOR THIS REPORT=  
TOTAL PAGES FOR ALL REPORTS, INCLUDING THIS ONE=

This information is provided to allow the user to monitor the volume of the request output. This volume determines the manner in which the reports will be produced. If the total pages requested is 10 or less, all reports will be printed directly to the terminal. If the total is from 11 to 25, only reports IS01, LS03, and GS02 (if requested) are printed to the terminal; all other reports are sent to the computer's line printer. Reports will be generated immediately and the user may perform additional iterations. If the total is greater than 25, reports IS01, LS03, and GS02 (if requested) are printed at the terminal; all other reports are sent to the line printer on a delayed basis, the iterative capability is disabled, and execution terminates following the projections.

TABLE 3.5  
REPORT CODES

DS01	-- Base-year inventory, summary
DD01	-- Base-year inventory, detailed
IS01	-- Projected inventory, summary
IS02	-- Projected average strength, summary
ID01	-- Projected inventory, detailed
ID02	-- Projected average strength, detailed
LS01	-- "Other" losses, summary
LS02	-- Within-year gains/losses, summary
LS03	-- Total losses, summary
LS04	-- Losses by type
LD01	-- "Other" losses, detailed
LD02	-- Within-year gains/losses, detailed
LD03	-- Total losses, detailed
GS01	-- Surviving gains, summary
GS02	-- Total gains, summary
GD01	-- Surviving gains, detailed
GD02	-- Total gains, detailed

### 3.3.2.13 Detail Report Options

If the requested report is a detailed one, a secondary prompt loop is entered and the following prompt is issued.

#### INPUT LEVEL OF DETAIL OPTION

to determine which of the detail options are to be generated. Legal options are:

- Stop (default). This response terminates the secondary prompt loop. If entered without specifying any detail, the total report is generated by default.
- CX. This response cancels the report currently being processed.
- All. This response generates all of the detailed reports.
- FEM. This response generates a report for the sum of all females.
- IRR. This response produces reports only for the IRR.
- MALE. This response generates a report for the sum of all males.
- SEX. This response generates two reports, one for males and one for females. It is equivalent to specifying MALE and FEM individually.
- SR. This response produces reports for the SR only.
- SUB. This response generates a report for each of the user-defined subpopulations.
- TOT. This response generates a report for the total category.
- Subpopulation. Responding with the number of one of the subpopulations generates a report for that subpopulation.

Following a request for a detail option, the message

PAGES FOR THIS REPORT=n

is generated, allowing the user to monitor the volume of the output for the current report.

#### 3.3.2.14 Confirmation

This is a conditional prompt dependent upon the volume of the output. If the total pages of output is more than 10, the prompt

TOTAL PAGES FOR ALL REPORTS=n  
PLEASE CONFIRM

will be issued. It allows the user to verify the volume of output prior to projection of the inventory. Legal responses are:

- STOP (default). This response confirms the report volume and allows processing to continue.
- CX. This response cancels all previously requested reports, resets the page count to zero, and begins prompting for report codes again.

If the output volume is 10 pages or less, this prompt will be bypassed and processing will automatically continue.

#### 3.3.2.15 Multiple Iterations

This is a conditional prompt dependent upon the volume of output. If more than 25 pages of output were requested, the multiple iteration capability is disabled and execution terminates. Otherwise, the prompt

ANOTHER ITERATION? (Y OR N)

is issued. A response of Y (yes) will result in the message

ITERATION NUMBER n BEGINNING

and a delay as the baseline rates and base-year inventory are reloaded. Any other response results in termination of the EFG.

### 3.3.3 Output Formats

The EFG generates three types of output; prompts, error messages, and reports. All prompts are described in Section 3.3.2 and summarized in Appendix A. Error messages are self-explanatory and are listed in Appendix B. Available reports are listed in Table 3.5 and are shown in Appendix C.

**APPENDIX A**

**PROJECTION OF ENLISTED RESERVE COMPONENT STRENGTHS-II  
(PERCS-II)**

**PROMPTS AND RESPONSES**

CONTENTS

- A.1 DATA BASE GENERATOR
- A.2 ENLISTED FORECAST GENERATOR

A.1 DATA BASE GENERATOR

<u>Prompt</u>	<u>Response</u>
ENTER BIN NUMBER OF CONSTRUCTED DATA TAPE	5-characters, CSS-assigned bin number
ENTER BIN NUMBER OF TRANSACTED DATA TAPE	5-characters, CSS-assigned bin number
ENTER LAST TWO DIGITS OF BASE YEAR	Last two digits of fiscal year
ENTER PRIORITY AT WHICH BATCH JOB IS TO BE RUN	0 1 2
0 -- IMMEDIATELY 1-- WITHIN 4 HOURS	
2 -- OVERNIGHT	

## A.2 ENLISTED FORECAST GENERATOR

<u>Prompt</u>	<u>Responses</u>
ENTER PREBUILT-FILE FLAG	HELP 0 1 2
ENTER NAME OF PREBUILT FILE	HELP filename
INPUT SUBPOPULATION ATTRIBUTE	STOP OTHER (default) HELP CX subattribute list-- attribute values separated by commas, no imbedded blanks (ref. Table 3.4)
INPUT BASE YEAR	HELP last two digits of fiscal year
INPUT RUN IDENTIFICATION	HELP 4-character run identifier
INPUT PROJECTION PERIOD (0-9)	HELP CX 0 (default) generates 10 years one-digit number
RATE OVERRIDE OPTION? PROJECTION CONSTRAINT OPTION? COST ANALYSIS OPTION? BONUS EFFECTS OPTION?	YES NO CX STOP HELP
DO YOU WANT TO CHANGE LOSS RATES? DO YOU WANT TO CHANGE YETS=1 RATES? DO YOU WANT TO CHANGE REDISTRIBUTION RATES? DO YOU WANT TO CHANGE CATEGORY TRANSFER RATES? DO YOU WANT TO CHANGE W/IN-YR LOSS RATES? DO YOU WANT TO CHANGE GAIN DISTRIBUTIONS?	YES NO HELP

INPUT LOS RANGE	MALE
INPUT CATEGORY RANGE	FEM
INPUT SUBPOPULATION RANGE	HELP number number-number null
INPUT NEW DATA VALUE	HELP number
INPUT NEW REDISTRIBUTION VALUES	n,n,n,n,n,n,n HELP
ADDITIONAL OVERRIDE DESIRED?	YES NO HELP
INPUT END STRENGTH OPTION	TOT SEX CAT MIXD HELP Null
INPUT END STRENGTH FOR *****	number HELP
PRIORITY OVERRIDES DESIRED FOR ***	YES NO HELP
INPUT SUBPOPULATIONS FOR PRIORITIES	subpopulation numbers
1 2 3 ...	
PLEASE ENTER DESIRED GAIN OPTION	HELP STOP (default) TOT CAT MIXD subpopulation number attribute (SEX,EDUC,RACE, MOS ???)
ENTER GAINS FOR gain option	HELP CX 0 (default)--uses value in data files number of gains

INPUT REPORT CODE OPTION

STOP (default)  
HELP  
CX  
DD01 LD01  
DS01 LD02  
GD01 LD03  
GD02 LS01  
GS01 LS02  
GS02 LS03  
ID01 LS04  
ID02  
IS01  
IS02

INPUT LEVEL OF DETAIL OPTION

HELP  
STOP (default)  
CX  
ALL  
SR  
IRR  
SEX  
MALE  
FEM  
SUB  
TOT  
subpopulation number

TOTAL PAGES FOR ALL REPORTS = n  
PLEASE CONFIRM

STOP (default)  
CX  
HELP

ANOTHER ITERATION? (Y OR N)

Y  
N (default)

APPENDIX B

PROJECTION OF ENLISTED RESERVE COMPONENTS STRENGTHS - II  
(PERCS - II)

ERROR MESSAGES

CONTENTS

- B.1 DATA BASE GENERATOR
- B.2 ENLISTED FORECAST GENERATOR

### B.1 DATA BASE GENERATOR

Message	Error
INVALID PRIORITY OPTION	Priority option was not 0, 1 or 2. The DBG will have to be reinitiated.

## B.2 ENLISTED FORECAST GENERATOR

Message	Error
INVALID PRE-BUILT OPTION	Requested option was not one of the three legal values for the prebuilt file option.
***INVALID ATTRIBUTE***	An unrecognizable value was found in a subpopulation's subattribute list. The entire list will be discarded.
***INVALID ATTRIBUTE-EXCEEDED 4 CHARACTERS***	One of the values in a sub-attribute list was longer than 4 characters. The entire list will be discarded. Probable error was an omitted comma separating values.
***EXCEEDED NUMBER OF SUBPOPULATIONS (24)	More than 24 subpopulations have been explicitly defined. Processing will continue using the first 24 subpopulation definitions.
***ERROR: MAXIMUM NUMBER OF SUBPOPULATIONS EXCEEDED, "STOP" HAS BEEN ASSUMED	An attempt to terminate the subpopulation prompt loop with the OTHER option will generate more than 24 subpopulations. The STOP option will be substituted and the "other" subpopulations will not be created.
***INVALID RESPONSE--PLEASE CONFIRM	An invalid response was entered when confirming the termination of the subpopulation prompt loop with the "STOP" option.
***ERROR: INVALID OPTION REQUESTED	The requested gain option is not a legal value.
INPUT FROM ALTERNATE SOURCE NOT CURRENTLY AVAILABLE	The "ALT" gain option has not been implemented. This response will be ignored.
***ERROR: INVALID SUBPOPULATION REQUESTED=n	The subpopulation number entered is not one of the current user-defined subpopulations.

## B.2 ENLISTED FORECAST GENERATOR

Message	Error
INVALID REPORT CODE	The requested report code was not one of the 17 authorized report codes.
ERROR, ENTERED CX(CANCEL), NO REPORTS SPECIFIED	The cancel command was input before any reports were requested. The cancel command will be ignored.
ERROR: INCORRECT CONFIRMATION VALUE xxxx	An invalid confirmation response was given when prompted to confirm report page count.
*****INVALID DETAIL OPTION*****	The level-of-detail option for a detailed report was not valid.
*****INVALID SUBPOPULATION VALUE***** INPUT VALUE OF n EXCEEDS MAXIMUM DEFINED VALUE OF m	The subpopulation number entered for a level-of-detail option exceeded the number of user-defined subpopulations in the current execution.

**APPENDIX C**

**PROJECTION OF ENLISTED RESERVE COMPONENTS STRENGTHS - II  
(PERCS - II)**

**REPORT FORMATS**

SUBPOPULATION DEFINITIONS

NUMBER	DEFINITION
1	OTHER MALE
2	OTHER FEMALE

USMR RUN: GAINS

PERCS-II BASELINE DATA

DS01

BEGINNING INVENTORY

SELECTED  
RESERVE      IRR

SUBPOP- 1	65872	74918
SUBPOP- 2	4775	1853

TOTAL	70647	76771
-------	-------	-------

JSNR RUN: GAINS

PERCS-II INVENTORY PROJECTIONS  
END YEAR STRENGTH

IS01

SELECTED RESERVE

----- PROJECTION YEAR -----

SUBPOP	81	82	83	84	85	86	87
1	61414	59336	57445	56622	56091	55904	55641
2	4099	3720	3498	3359	3270	3245	3234
TOTAL	65513	63056	60943	59981	59361	59149	58875

INDIVIDUAL READY RESERVE

----- PROJECTION YEAR -----

SUBPOP	81	82	83	84	85	86	87
1	80768	70771	64872	69150	73266	73106	72281
2	1899	1743	1567	1578	1485	1455	1430
TOTAL	82667	72514	66439	70728	74751	74561	73711

USNR RUN: GAINS PERCS-II CATEGORY TRANSFERS TSD 1  
----- PROJECTION YEAR -----  
CATEGOR 81 82 83 84 85 86 87  
SR 10047 8982 8444 6164 7981 7873 7873  
IRR 3662 4273 3570 3512 3705 3851 3791

USNR RUN: GAINS

PERCS-II GAIN PROJECTIONS  
SURVIVING GAINS

GSL 1

SELECTED RESERVE

----- PROJECTION YEAR -----

SUBPOP	81	82	83	84	85	86	87
1	10670	10854	10732	11035	10915	11035	11035
2	884	898	688	914	903	914	914
TOTAL	11554	11752	11620	11949	11818	11949	11949

INDIVIDUAL READY RESERVE

----- PROJECTION YEAR -----

SUBPOP	81	82	83	84	85	86	87
1	39410	25545	28219	32478	34160	32674	32576
2	388	255	281	323	339	325	324
TOTAL	39398	25800	28500	32801	34499	32999	32900

USNR RUN: GAINS

PERCS-II GAIN PROJECTIONS  
ACTUAL GAINS

GS02-

SUBPOP	SELECTED RESERVE						
	PROJECTION YEAR						
1	81	82	83	84	85	86	87
2	16247	16526	16341	16804	16619	16834	16884
TOTAL	1255	1275	1260	1296	1282	1296	1296
	17502	17801	17601	18100	17901	18100	18100

SUBPOP	INDIVIDUAL READY RESERVE						
	PROJECTION YEAR						
1	81	82	83	84	85	86	87
2	39010	25545	28219	32478	34160	32674	32576
TOTAL	388	255	261	323	339	325	324
	39398	25800	28500	32801	34499	32999	32900

USNR RUN: GAINS

PERCS-II LOSS PROJECTIONS  
FIRST YEAR LOSSES

LS01

SELECTED RESERVE

PROJECTION YEAR

SUBPOP	81	82	83	84	85	86	87
1	5577	5672	5649	5769	5704	5769	5769
2	371	377	372	382	379	382	382
TOTAL	5948	6049	5981	6151	6283	6151	6151

INDIVIDUAL READY RESERVE

PROJECTION YEAR

SUBPOP	81	82	83	84	85	86	87
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

USMR RUN: GAINS

PERCS-II LOSS PROJECTIONS  
OTHER LOSSES

LS02

SELECTED RESERVE

SUBPOP	81	82	83	84	85	86	87
1	9685	8829	8277	7721	7633	7642	7654
2	815	665	578	534	526	491	481
TOTAL	10500	9494	8855	8255	8159	8133	8135

INDIVIDUAL READY RESERVE

SUBPOP	81	82	83	84	85	86	87
1	38602	39642	38460	32332	33853	36410	37041
2	1083	1014	982	825	894	797	786
TOTAL	39685	40656	39442	33157	34747	37207	37827

USNR RUN: GAINS

PERCS-II LOSS PROJECTIONS  
TOTAL LOSSES

LS03

SELLCTED RESERVE

SUBPOP	81	82	83	84	85	86	87
1	15262	14501	13886	13490	13337	13411	13423
2	1186	1042	950	916	905	873	863
TOTAL	16448	15543	14836	14406	14242	14284	14286

INDIVIDUAL READY RESERVE

SUBPOP	81	82	83	84	85	86	87
1	38602	39642	38460	32332	33853	36410	37041
2	1083	1014	982	825	894	797	766
TOTAL	39685	40656	39442	33157	34747	37207	37827

USNR RUN: GAINS

PERCS-II LOSS PROJECTIONS  
PROJECTION YEAR -- 1981

LS44

SUBPOP	----SELECTED RESERVE----			INDIVIDUAL READY RESERVE			SUBPOP TOTAL
	FIRST YEAR	OTHER	TOTAL	FIRST YEAR	OTHER	TOTAL	
	1	5577	9685	15262	0	38602	
2	371	815	1186	0	1083	1083	2269
TOTAL	5948	10500	16448	0	39685	39685	56133.

USNM RUN: GAINS

PERCS-II LOSS PROJECTIONS  
PROJECTION YEAR -- 1982

LS04

SUBPOP	----SELECTED RESERVE----			INDIVIDUAL READY RESERVE			SUBPOP TOTAL
	FIRST YEAR	OTHER	TOTAL	FIRST YEAR	OTHER	TOTAL	
1	5672	6829	14501	0	39642	39642	54143
2	377	665	1042	0	1014	1014	2056
<b>TOTAL</b>	<b>6049</b>	<b>9494</b>	<b>15543</b>	<b>0</b>	<b>40656</b>	<b>40656</b>	<b>56199</b>

**USNR RUN: GAINS**

**PERCS-II LOSS PROJECTIONS  
PROJECTION YEAR -- 1983**

**LS04**

SUBPOP	----SELECTED RESERVE----			INDIVIDUAL READY RESERVE			SUBPOP TOTAL
	FIRST YEAR	OTHER	TOTAL	FIRST YEAR	OTHER	TOTAL	
1	5609	8277	13886	0	38460	38460	52346
2	372	578	950	0	982	982	1932
<b>TOTAL</b>	<b>5981</b>	<b>8855</b>	<b>14836</b>	<b>0</b>	<b>39442</b>	<b>39442</b>	<b>54278</b>

USNR RUN: GAINS

PERCS-II LOSS PROJECTIONS  
PROJECTION YEAR -- 1984

LS04

SUBPOP	----SELECTED RESERVE----			INDIVIDUAL READY RESERVE			SUBPOP TOTAL
	FIRST YEAR	OTHER	TOTAL	FIRST YEAR	OTHER	TOTAL	
1	5769	7721	13490	0	32332	32332	45822
2	382	534	916	0	825	825	1741
<b>TOTAL</b>	<b>6151</b>	<b>8255</b>	<b>14496</b>	<b>0</b>	<b>33157</b>	<b>33157</b>	<b>47563</b>

USNR RUN: GAINS

PERCS-II LOSS PROJECTIONS  
PROJECTION YEAR -- 1985

LS04

SUBPOP	----SELECTED RESERVE----			INDIVIDUAL READY RESERVE			SUBPOP TOTAL
	FIRST	YEAR	OTHER	FIRST	YEAR	OTHER	
	TOTAL			TOTAL			
1	5704	7633	13337	0	33853	33853	47196
2	379	526	905	0	894	694	1799
<b>TOTAL</b>	<b>6083</b>	<b>8159</b>	<b>14242</b>	<b>0</b>	<b>34747</b>	<b>34747</b>	<b>48989</b>

USNR RUN: GAINS

PERCS-II LOSS PROJECTIONS  
PROJECTION YEAR -- 1986

LS04

SUBPOP	----SELECTED RESERVE----			INDIVIDUAL READY RESERVE			SUBPOP TOTAL
	FIRST YEAR	OTHER	TOTAL	FIRST YEAR	OTHER	TOTAL	
1	5769	7642	13411	0	36410	36410	49821
2	382	491	873	0	797	797	1670
<b>TOTAL</b>	<b>6151</b>	<b>8133</b>	<b>14284</b>	<b>0</b>	<b>37207</b>	<b>37207</b>	<b>51491</b>

USNR RUN: GAINS

PERCS-II LOSS PROJECTIONS  
PROJECTION YEAR -- 1987

LSB4

SUBPOP	----SELECTED RESERVE----			INDIVIDUAL READY RESERVE			SUBPOP TOTAL
	FIRST YEAR	OTHER	TOTAL	FIRST YEAR	OTHER	TOTAL	
1	5769	7654	13423	0	37841	37841	50464
2	382	481	863	0	786	786	1649
<b>TOTAL</b>	<b>6151</b>	<b>8135</b>	<b>14286</b>	<b>0</b>	<b>37827</b>	<b>37827</b>	<b>52113</b>

SUBPOPULATION DEFINITIONS

NUMBER	DEFINITION
1	OTHER MALE
2	OTHER FEMALE

USMR RUN: ENDSTRENGTH

PERCS-II BASELINE DATA

DS01

BEGINNING INVENTORY

SELECTED  
RESERVE      IRR

SUBPOP- 1	65872	74918
SUBPOP- 2	4775	1853

TOTAL	70647	76771
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USNR RUN: ENDSTRENGTH

PERCS-II INVENTORY PROJECTIONS  
END YEAR STRENGTH

IS&amp;1

## SELECTED RESERVE

SUBPOP	81	82	83	84	85	86	87
1	64990	64896	65268	67039	68812	71330	73648
2	4711	4705	4733	4862	4989	5171	5353
<b>TOTAL</b>	<b>69701</b>	<b>69601</b>	<b>70001</b>	<b>71901</b>	<b>73801</b>	<b>76501</b>	<b>79201</b>

## INDIVIDUAL READY RESERVE

SUBPOP	81	82	83	84	85	86	87
1	85973	85191	83923	97586	105783	108321	108515
2	2127	2107	2075	2413	2617	2677	2683
<b>TOTAL</b>	<b>88100</b>	<b>87298</b>	<b>85996</b>	<b>99999</b>	<b>108400</b>	<b>110998</b>	<b>111198</b>

USNR RUN: ENDSTRENGTH

PERCS-II CATALOGY TRANSFERS

TS01

CATEGO	PROJECTION YEAR					
	81	82	83	84	85	86
SR	10847	9836	9722	9834	10143	10472
IRR	3862	4605	4311	4414	5193	5416
						5553

GSNR RUN: ENDSTRENGTH

PERCS-II GAIN PROJECTIONS  
SURVIVING GAINS

GS21

SELECTED RESERVE

----- PROJECTION YEAR -----

SUBPOP	81	82	83	84	85	86	87
1	14246	13716	14370	15653	15547	16853	17537
2	1496	1449	1474	1580	1579	1628	1684
TOTAL	15742	15165	15844	17233	17086	18481	19221

INDIVIDUAL READY RESERVE

----- PROJECTION YEAR -----

SUBPOP	81	82	83	84	85	86	87
1	44215	35859	38602	50873	50473	51307	50016
2	616	359	472	720	843	769	738
TOTAL	44831	36218	39074	51593	51316	52076	50754

USNR RUN: ENDSTRENGTH

PLRCS-11 GAIN PROJECTIONS  
ACTUAL GAINS

GS02

## SELECTED RESERVE

SUBPOP	81	82	83	84	85	86	87
1	21691	20665	21860	23834	23613	25660	26701
2	2125	2058	2094	2244	2244	2314	2393
TOTAL	23816	22943	23974	26076	25854	27974	29094

## INDIVIDUAL READY RESERVE

SUBPOP	81	82	83	84	85	86	87
1	44215	35859	38602	50873	50473	51307	50016
2	616	359	472	720	843	769	738
TOTAL	44831	36218	39074	51593	51316	52076	50754

USNR RUN: ENDSTRENGTH

PERCS-II LOSS PROJECTIONS  
FIRST YEAR LOSSES

LSA1

SUBPOP	SELECTED RESERVE						
	81	82	83	84	85	86	87
1	7445	7169	7510	6181	6103	8807	9164
2	629	609	620	664	665	686	709
TOTAL	8074	7778	8136	6845	8768	9493	9873

SUBPOP	INDIVIDUAL READY RESERVE						
	81	82	83	84	85	86	87
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

USNR RUN: ENDSTRENGTH

PERCS-II LOSS PROJECTIONS  
OTHER LOSSES

LS22

SUBPOP	SELECTED RESERVE						
	PROJECTION YEAR						
1	81	82	83	84	85	86	87
2	9685	9302	9287	9180	9467	9955	10367
TOTAL	815	729	740	728	763	767	791
	10500	10031	10027	9908	10230	10722	11158

SUBPOP	INDIVIDUAL READY RESERVE						
	PROJECTION YEAR						
1	81	82	83	84	85	86	87
2	38602	41144	44575	41909	46540	53144	54472
TOTAL	1083	1103	1205	1099	1321	1385	1439
	39685	42247	45780	43008	47861	54529	55911

USNR RUN: ENDSTRENGTH

PERCS-II LOSS PROJECTIONS  
TOTAL LOSSES

LS03

SELECTED RESERVE

SUBPOP	81	82	83	84	85	86	87
1	17130	16471	16797	17361	17570	18762	19531
2	1444	1338	1360	1392	1428	1453	1500
TOTAL	18574	17809	18157	18753	18998	20215	21831

INDIVIDUAL READY RESERVE

SUBPOP	81	82	83	84	85	86	87
1	38602	41144	44575	41909	46540	53144	54472
2	1083	1103	1205	1099	1321	1385	1439
TOTAL	39685	42247	45780	43008	47861	54529	55911

USNR RUN: ENDSTRENGTH PERCS-II LOSS PROJECTIONS  
PROJECTION YEAR -- 1981

LS04

SUBPOP	----SELECTED RESERVE----			INDIVIDUAL READY RESERVE			SUBPOP TOTAL
	FIRST YEAR	OTHER	TOTAL	FIRST YEAR	OTHER	TOTAL	
1	7445	9685	17130	0	38602	38602	55732
2	629	815	1444	0	1083	1083	2527
<b>TOTAL</b>	<b>8074</b>	<b>10500</b>	<b>18574</b>	<b>0</b>	<b>39685</b>	<b>39685</b>	<b>58259</b>

USNR RUN: ENDSTRENGTH PERCS-II LOSS PROJECTIONS  
PROJECTION YEAR -- 1982

LS04

SUBPOP	----SELECTED RESERVES----			INDIVIDUAL READY RESERVE			SUBPOP TOTAL
	FIRST YEAR	OTHER	TOTAL	FIRST YEAR	OTHER	TOTAL	
1	7169	9302	16471	0	41144	41144	57615
2	609	729	1338	0	1103	1103	2441
<b>TOTAL</b>	<b>7778</b>	<b>10031</b>	<b>17809</b>	<b>0</b>	<b>42247</b>	<b>42247</b>	<b>60056.</b>

USNR RUN: ENDSTRENGTH PERCS-II LOSS PROJECTIONS  
PROJECTION YEAR -- 1983

LS04

SUBPOP	---SELECTED RESERVE---			INDIVIDUAL READY RESERVE			SUBPOP TOTAL
	FIRST YEAR	OTHER	TOTAL	FIRST YEAR	OTHER	TOTAL	
1	7510	9287	16797	0	44575	44575	61372
2	620	740	1360	0	1205	1205	2565
<b>TOTAL</b>	<b>8130</b>	<b>10027</b>	<b>18157</b>	<b>0</b>	<b>45780</b>	<b>45780</b>	<b>63937</b>

USNR RUN: ENDSTRENGTH PERCS-II LOSS PROJECTIONS  
PROJECTION YEAR -- 1984

LS04

SUBPOP	----SELECTED RESERVE----			INDIVIDUAL READY RESERVE			SUBPOP TOTAL
	FIRST YEAR	OTHER	TOTAL	FIRST YEAR	OTHER	TOTAL	
1	8181	9180	17361	0	41989	41989	59270
2	664	728	1392	0	1099	1099	2491
<b>TOTAL</b>	<b>8845</b>	<b>9908</b>	<b>18753</b>	<b>0</b>	<b>43008</b>	<b>43008</b>	<b>61761</b>

**USNR RUN: ENDSTRENGTH PERCS-II LOSS PROJECTIONS  
PROJECTION YEAR -- 1985**

**LS04**

<b>SUBPOP</b>	<b>----SELECTED RESERVE----</b>			<b>INDIVIDUAL READY RESERVE</b>			<b>SUBPOP TOTAL</b>
	<b>FIRST YEAR</b>	<b>OTHER</b>	<b>TOTAL</b>	<b>FIRST YEAR</b>	<b>OTHER</b>	<b>TOTAL</b>	
<b>1</b>	<b>8103</b>	<b>9467</b>	<b>17570</b>	<b>0</b>	<b>46540</b>	<b>46540</b>	<b>64110</b>
<b>2</b>	<b>665</b>	<b>763</b>	<b>1428</b>	<b>0</b>	<b>1321</b>	<b>1321</b>	<b>2749</b>
<b>TOTAL</b>	<b>8768</b>	<b>10230</b>	<b>18998</b>	<b>0</b>	<b>47861</b>	<b>47861</b>	<b>66859</b>

USMR RUN: ENDSTRENGTH PERCS-II LOSS PROJECTIONS  
PROJECTION YEAR -- 1986

LS04

SUBPOP	---SELECTED RESERVE---			INDIVIDUAL READY RESERVE			SUBPOP TOTAL
	FIRST YEAR	OTHER	TOTAL	FIRST YEAR	OTHER	TOTAL	
1	8807	9955	18762	0	53144	53144	71906
2	686	767	1453	0	1385	1385	2838
<b>TOTAL</b>	<b>9493</b>	<b>10722</b>	<b>20215</b>	<b>0</b>	<b>54529</b>	<b>54529</b>	<b>74744</b>

**USNR RUN: ENDSTRENGTH PERCS-II LOSS PROJECTIONS  
PROJECTION YEAR -- 1987**

LS04

SUBPOP	----SELECTED RESERVE----			INDIVIDUAL READY RESERVE			SUBPOP TOTAL
	FIRST YEAR	OTHER	TOTAL	FIRST YEAR	OTHER	TOTAL	
1	9164	10367	19531	0	54472	54472	74003
2	709	791	1500	0	1439	1439	2939
<b>TOTAL</b>	<b>9873</b>	<b>11158</b>	<b>21031</b>	<b>0</b>	<b>55911</b>	<b>55911</b>	<b>76942</b>

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